

99905

**Shears, Beverly**

---

**From:** Devi, Sarvamangala  
**Sent:** Monday, July 28, 2003 3:00 PM  
**To:** Shears, Beverly  
**Subject:** 10/060,521

Beverly:

Would you please perform a sequence and an interference search for a polypeptide comprising an amino acid sequence having at least 75% identity to SEQ ID NO: 2 in application 10/060,521?

Thanks.

S. DEVI, Ph.D.  
AU 1645  
CM1-7E15  
Mailbox: CM1-7E12

CC further identifying MDR efflux pumps that may be used as drug targets to  
 CC increase the sensitivity of cells to antibiotic agents. Cells  
 CC comprising the identifiers may be used to screen for potential  
 CC blockers or inhibitors of MDR pump function or gene expression.

XX	Sequence	498 AA;	Score 99.31; Score 2522; Score 2522; Length 498;
XX	Query Match	99.31; Best Local Similarity 99.24; Best Local Similarity 99.24;	Pred. No. 5.5e-189; Pred. No. 5.5e-189;
XX	Matches	494; Conservative 2; Mismatches 2;	Indels 0; Gaps 0;
XX	1	MSKIELKQLSPAYDNQEVYLIDQANITMDTNKLGIGRNGRGKTTLRLQKQDQYQE 60	
XX	1	MSKIELKQLSPAYDNQEVYLIDQANITMDTNKLGIGRNGRGKTTLRLQKQDQYQE 60	
Qy	61	ILHODFYYFPQITVAEBCQTYVVLQEVTSFQWELERELTTLNVDPEBLVRPFSLSGG 120	
Db	61	ILHODFYYFPQITVAEBCQTYVVLQEVTSFQWELERELTTLNVDPEBLVRPFSLSGG 120	
Qy	121	EKTKVLLGILFTTENAFPLIDEPTNHLDLAGRQVAEYLKCKKCHGFTLVSHDRAFTDEVV 180	
Db	121	EKTKVLLGILFTTENAFPLIDEPTNHLDLAGRQVAEYLKCKKCHGFTLVSHDRAFTDEVV 180	
Qy	181	DHILAIEKSLQTLYQGNFSIYEPKQKRDAPLAEENKIGKEVNRLKETARKKAEVSMNR 240	
Db	181	DHILAIEKSLQTLYQGNFSIYEPKQKRDAPLAEENKIGKEVNRLKETARKKAEVSMNR 240	
Qy	241	EGDKYGNAKEKGSQIAFDGAICARAARVMRSKHKICQRAETQLAKEKLLKDLEYIDPL 300	
Db	241	EGDKYGNAKEKGSQIAFDGAICARAARVMRSKHKICQRAETQLAKEKLLKDLEYIDPL 300	
Qy	301	SMDYQPTHHKTLTIVTEELRLGKYEKNWLAPLPSFSINAGBIVGTTGNGSGKSSLQYLLD 360	
Db	301	SMDYQPTHHKTLTIVTEELRLGKYEKNWLAPLPSFSINAGBIVGTTGNGSGKSSLQYLLD 360	
Qy	361	NFGDSEGAETLAHQLTISYVRODYEDNQGTSEPAEKVQDLYTFLNLRLGMRAVP 420	
Db	361	NFGDSEGAETLAHQLTISYVRODYEDNQGTSEPAEKVQDLYTFLNLRLGMRAVP 420	
Qy	421	TNRIEQMSMGQRKKEVAKSLSLQSAELYTDEPLNYLDFVNHOQLEALILSYKPAMLVIB 480	
Db	421	TNRIEQMSMGQRKKEVAKSLSLQSAELYTDEPLNYLDFVNHOQLEALILSYKPAMLVIB 480	
Qy	481	HDAFMKCKITDKKIVLKS 498	
Db	481	HDAFMKCKITDKKIVLKS 498	

Search completed: July 28, 2003, 15:39:59  
 Job time : 99 secs

Step 1D No : 2

RESULT 2  
 ABB47285  
 ID ABB47285 standard, Protein, 498 AA.  
 XX AC ABB47285;  
 XX DT 31-JAN-2002 (first entry)  
 XX DE Enterococcus faecalis Polypeptide Abc23.  
 XX KW MDR; efflux pump; multidrug resistance; antibacterial; drug target.  
 XX OS Enterococcus faecalis.  
 PN WO200179257-A2.  
 XX PD 25-OCT-2001.  
 PR 12-APR-2001; 2001WO-US12230.  
 PR 14-APR-2000; 2000US-197349P.  
 XX PA (PHYT-) PHYTERA INC.  
 XX PI Davis DV, Rogers BL, White AC;  
 XX DR WPI; 2001-626526/72.  
 DR N-REDBP; ABA8296.  
 XX PR Determining whether a candidate nucleotide or polypeptide  
 PR encodes/functions as a multidrug resistance (MDR) efflux pump comprises  
 PR searching a database of nucleotide/polypeptide sequences for those with  
 XX high identity to known MDR pumps -  
 XX PA Claim 10: Fig 26; 139pp; English.  
 XX CC The invention relates to determining whether a candidate nucleotide  
 CC (ABA82938-ABA82971) or polypeptide (ABB47263-ABB47296) encodes/functions  
 CC as a multidrug resistance (MDR) efflux pump comprising, searching a  
 CC database for sequences high identity known MDR efflux pumps and then  
 CC deleting/mutating an identified region of the DNA in a bacterial cell and  
 CC determining whether the bacterial cell exhibits increased or decreased  
 CC sensitivity to an antibacterial agent. The identified pumps are useful for